AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT	1. CONTRACT ID CODE	PAGE OF PAGES
		1 3

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
0003		N/A	

6. ISSUED BY	CODE	7. ADMINISTERED BY (If other than Item 6)	CODE
Contracting Officer NAVSURFWARCENDIV Crane 300 Hwy 361 Crane, IN 47522-5001 Buyer: Paul R. Johnson (812)854-3225	N00164		

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)		9A. AMENDMENT OF SOLICITATION NO.
		X N00164-98-R-0061
		9B. DATED (SEE ITEM 11) 04/09/98
		10A. MODIFICATION OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE	FACILITY CODE	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☒ is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning one copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. Accounting and Appropriation Data (If required)

N/A

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

00	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

The purpose of this amendment is to replace pages 23 and 32 of the specification within subject solicitation. All other terms and conditions remain unchanged.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF SIGNER (Type or print)	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
(Signature of person authorized to sign)		BY (Signature of Contracting Officer)	

3.3.1 Cartridge Case

3.3.1.1 The cartridge case shall be manufactured in accordance with industry standards and with standard commercial color finish. The cartridge case shall meet the external dimensional requirements of ANSI Z299.2-1992 for 12 gauge, 2 3/4 inch chamber shotshell and be of the high brass type. (C1) [A vent hole shall be present in the battery cup pocket of the shotshell hull.]

3.3.1.2 The shotshell head stamp shall be in accordance with commercial practice.

3.3.2 Propellant (C2) [Each cartridge shall contain propellant.] The propellant selection shall meet the stated performance requirements.

3.3.3 Projectile The projectile shall have a nominal weight of between one (1) and 1-1/8 ounces. Projectile Material shall be lead. The projectile design shall be determined by the contractor to meet ballistic requirements.

3.3.4 Primer. The primer shall be non-corrosive and of the lead-styphnate type. Primer type and composition shall be selected by the contractor to meet ballistic requirements. The primer may be staked or crimped in place to meet ballistic requirements.

3.3.5 Primed Case Sensitivity (M101). The energy imparted by a steel ball, 1.94 ± 0.02 ounces, falling 12 inches onto a simulated firing pin shall cause initiation of the primer. The energy imparted by a steel ball, 1.94 ± 0.02 ounces, falling 3 inches onto a simulated firing pin (simulated firing pin shall have a nominal weight of 70 grains (0.160 ounces) and spherical end radius of .0500 ± .0025 inches) shall not cause initiation of the primer (see section 4.3.1.1).

3.4 Complete Cartridge

3.4.1 Primer Seating Depth (M102) The primer shall be seated in the cartridge case to a depth of [0.000] to 0.012 inches below the face of the cartridge case head. The primer may be staked or crimped in place to meet requirements.

3.4.2 Cartridge Overall Length (M103). The overall length of the assembled cartridge shall be 2.405 inches maximum for a folded crimp, 2.450 inches maximum for a rolled crimp, or 2.760 inches minus 0.100 inches maximum for uncrimped cartridge.

3.5 Cartridge Ballistics Tests

3.5.1 Chamber Pressure. (M104). The maximum average chamber pressure (corrected) shall be 11,500 pounds per square inch (psi) as measured with a piezo-electric transducer. The chamber pressure (corrected) of any individual cartridge shall be less than 13,000 psi maximum as measured with a piezo-electric transducer.

3.5.2 Muzzle Velocity. (M105) [The corrected average muzzle velocity at 70°F shall be between 1,590 and 1,770 ft/sec.] The contractor shall select the average muzzle velocity, within the above limits, to meet ballistic requirements. The standard deviation of the muzzle velocity at 70°F shall not exceed 90 ft/sec.

3.5.3 Accuracy The extreme spread, at 50 yards, of any individual five (5) shot group shall be 5.0 inches maximum and the average extreme spread of all twenty 5-shot groups shall be 4.0 inches maximum.

A total of 10 projectiles shall be fired into the gelatin blocks. Gelatin blocks may be used for more than one projectile, providing the projectile tracks do not cross inside the block. Any projectile that crosses a previous projectile track shall not be included in the sample, and another projectile shall be fired in its place. The averages of the expanded diameters and the depths of penetration of the projectiles fired shall be determined. The requirements of 3.5.5 and 3.5.6 shall be met:

a. The lot shall be rejected if any two projectiles fail to meet the 90% retained weight requirement of 3.5.5.

b. The lot shall be rejected if the average depth of penetration of the projectiles fails to meet the requirement of 3.5.6, or if 2 or more individual projectiles fail to meet the minimum depth of penetration requirement of 3.5.6.

4.3.2.4.2 Plywood. This test shall be performed by firing a Mossberg 500 shotgun equipped with a 20 inch cylinder bore barrel from a fixed firing position. The test weapons shall be fired at a distance of 100 ±1 yards from a target comprised of a ¾ inch plywood panel. The plywood used for this test shall be an odd number of layers or piles of veneer or veneer and lumber having a thickness of not more than ⅛ inch per layer or ply which the alternating plies are laid with the grain at right angles. The plywood panel shall be supported by a test fixture on all edges by a test fixture. The maximum target size shall be four feet by four feet. Ten valid shots shall be obtained. A valid shot is an impact that is a minimum of three inches from any other shot and the edge of the target. Penetration is defined as the projectile passing completely through the barrier with no portion thereof remaining in the plywood. Ballistic gelatin prepared in accordance with Appendix E shall be placed behind the barrier for informational purposes. The depth of penetration, expanded diameter and weight retention of each projectile that is captured by the ballistic gelatin shall be recorded for informational purposes. The requirements of 3.5.6.2 shall be met.

4.3.2.4.3 Windshield Glass. This test shall be performed by firing a Mossberg Model 500 shotgun equipped with a 20 inch cylinder bore barrel from a target comprised of windshield glass in accordance with SAE J938. The test weapons shall be fired at a distance of 100±1 yards from a target comprised of SAE J938 windshield glass. The target shall be placed at 0° of obliquity. The glass panel shall be supported on all sides and have a minimum size of one foot by one foot, a maximum of four feet by four feet. Ten (10) valid shots shall be obtained. A valid shot is an impact that is a minimum of three inches from the edge of the glass panel. Penetration is defined as the projectile passing completely through the barrier with no portion thereof remaining in the glass panel. The glass panel shall be changed after each shot. Ballistic gelatin prepared in accordance Appendix E shall be placed 18 inches behind the barrier. The depth of penetration, expanded diameter and weight retention of each projectile that is captured by the ballistic gelatin shall be recorded. The requirements of 3.5.6.3 shall be met.

5. PACKAGING

5.1 Packing. For acquisition purposes, the packaging requirements shall be specified in the contract or order (see 6.2). When actual packaging of Materiel is performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.